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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,484	09/20/2001	Yoshinori Matsumoto	275778US6	3152

22850 7590 08/07/2006

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EXAMINER	
BATTAGLIA, MICHAEL V	
ART UNIT	**PAPER NUMBER**
2627	

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/957,484	MATSUMOTO, YOSHINORI	
	Examiner	Art Unit	
	Michael V. Battaglia	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11 and 12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2001 and 20 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2006 has been entered.

Drawings

2. The drawings were received on April 20, 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9, 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 6 and 7 contain the term "in the neighborhood" which is not found in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9, 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 1, 6 and 7, the term "in the neighborhood" in claims 1, 6 and 7 is a relative term which renders the claim indefinite. The term "in the neighborhood" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. How close the claimed "already recorded track" has to be to the claimed "Nth track" for the "already recorded track" to be "in the neighborhood of said Nth track" is unclear. Is the "already recorded track in the neighborhood of said Nth track" if the "already recorded track" is on the same disc as, in the same zone as, less than four tracks away from, or adjacent to the "Nth track"? As a result, the claims do not particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.

In regard to claims 11 and 12, the claimed "function curve" provides "more abrupt slope," but the claim does not specify what the "slope" is more abrupt than. Therefore, the scope of the protection sought is unclear, and the claims are indefinite. In addition, in the context of correcting focus precision, curves representing a jitter value or amplitude of an RF signal will have a slope of zero at the peak of the curve no matter how abrupt the curves the curves themselves are. As a result, how a curve having a slope of zero at the peak can be have a more abrupt slope at the peak than another curve also having a slope of zero at the peak is unclear.

In regard to claim 5, no statement will be made concerning the allowability of the claims over prior art due to the lack of compliance with the written description requirement and the lack

of clarity. However, Applicant's attention is drawn to Figs. 5 and 16 of Okada et al (hereafter Okada) (US 6,430,119) and Fig. 12 of Tani et al (US 6,574,177).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Muramatsu (US 6,747,924).

In regard to claim 1, Muramatsu discloses a recording and playback apparatus (Fig. 4) for recording data onto a predetermined recording medium (Fig. 4, element 36) and playing back said data from said recording medium, said recording and playback apparatus comprising: a judgment mechanism (Fig. 4, element 46) to determine whether or not to correct focus precision when recording data onto an Nth track (track of the "currently reproduced location" of Col. 12, line 16) of said recording medium or playing back data from said Nth track (Fig. 6, steps S31, S32 and S34); a computing mechanism (portion of Fig. 4, elements 46 and 58 that computes the "optimal (e.g., minimal) jitter level" of Col. 10, lines 48-49) to compute a performance function value ("optimal (e.g., minimal) jitter level" of Col. 10, lines 48-49) based on a jitter value or amplitude of an RF signal obtained from an already recorded track in the neighborhood of said Nth track (Col. 10, lines 39-52; Col. 12, lines 34-51; and note that the Nth track is in the neighborhood of the Nth track), and a correction mechanism (Fig. 4, element 58) to correct said

focus precision if said judgment mechanism determines to correct said focus precision in said recording data onto said Nth track of said recording medium or playing back data from said Nth track, said correction mechanism operating to correct said focus precision by using said performance function value (Fig. 6, step S35; Col. 10, lines 39-52; and Col. 12, lines 34-51).

In regard to claim 6, Muramatsu discloses a recording and playback method (Fig. 6) for recording data onto a predetermined recording medium (Fig. 4, element 36) and playing back said data from said recording medium, said recording and playback method comprising: determining whether or not to correct focus precision when recording data onto an Nth track (track of the "currently reproduced location" of Col. 12, line 16) of said recording medium or playing back data from said Nth track (Fig. 6, steps S31, S32 and S34); computing a performance function value ("optimal (e.g., minimal) jitter level" of Col. 10, lines 48-49 and Col. Col. 12, lines 50-51) based on a jitter value or amplitude of an RF signal obtained from an already recorded track in the neighbor of said Nth track (Col. 10, lines 39-52; Col. 12, lines 34-51; and note that the Nth track is in the neighborhood of the Nth track), and correcting said focus precision if it is determined to correct said focus precision in recording data onto said Nth track of said recording medium or playing back data from said Nth track, said correcting operating to correct said focus precision by using said performance function value (Fig. 6, step S35; Col. 10, lines 39-52; and Col. 12, lines 34-51).

In regard to claim 7, Muramatsu discloses the "steps" of claim 7, which correspond to the method of claim 6 (see rejection of claim 6 over Muramatsu above). In addition, the claimed "computer readable medium" is inherent to the CPU of Muramatsu (Fig. 4, element 46), which carries out the computer program instructions of Fig. 6 (Col. 12, lines 12-14).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al (hereafter Takagi) (US 6,567,350) in view of Tsutsui et al (hereafter Tsutsui) (US 5,751,675).

In regard to claim 1, Takagi discloses a recording and playback apparatus (Fig. 6) for recording data onto a predetermined recording medium (Fig. 6, element 601) and playing back said data from said recording medium, said recording and playback apparatus comprising: a judgment mechanism (Fig. 6, elements 616 and 617) to determine whether or not to correct focus precision when recording data onto an Nth track of said recording medium or playing back data from said Nth track (Fig. 8, steps S802, S804 and S805); a computing mechanism (inherent mechanism that computes the "moat [sic] suitable state" of Col. 11, line 29) to compute a performance function value ("moat [sic] suitable state" of Col. 11, line 29) obtained from an already recorded track (Fig. 1, element 104) in the neighborhood of said Nth track (note that the claimed "track in the neighborhood of said Nth track" reads on a track 104 at the innermost periphery of the recording medium because every track on a recording medium is in the same neighborhood), and a correction mechanism (Fig. 6, elements 613 and 615) to correct said focus precision if said judgment mechanism determines to correct said focus precision in said recording data onto said Nth track of said recording medium or playing back data from said Nth

track, said correction mechanism operating to correct said focus precision by using said performance function value (Col. 16, lines 54-60; Col. 18, lines 35-37; and Col. 11, lines 7-29). Takagi does not disclose that the performance function value is computed on a jitter value or amplitude of an RF signal.

Tsutsui discloses a computing a performance function value ("minimum value of the jitters" of Col. 15, lines 25-28 or "maximum value of the amplitude of the RF signal" of Col. 14, lines 44-52) on a jitter value (Figs. 16 and 18) or amplitude of an RF signal (Figs. 5 or 7) to discriminate an optimum focus offset value (Col. 14, lines 44-52 and Col. 15, lines 25-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for performance function value of Takagi to be computed on a jitter value or amplitude of an RF signal as suggested by Tsutsui, the motivation being for the focus precision of Takagi to discriminate an optimum focus offset value.

In regard to claim 2, Takagi discloses that said judgment mechanism forms a judgment to correct said focus precision if a predetermined period of time is determined to have lapsed (Col. 19, lines 1-24).

In regard to claim 3, Takagi discloses that said judgment mechanism forms a judgment to correct said focus precision if a temperature inside a disk drive setting said recording medium is determined to have increased by a predetermined temperature raise (Col. 16, lines 7-29).

In regard to claim 6, Takagi in view of Tsutsui discloses a recording and playback method having method steps corresponding to the mechanisms of claim 1 (see rejection of claim 1 over Takagi in view of Tsutsui above).

In regard to claim 7, Takagi in view of Tsutsui discloses a computer performing the method steps corresponding to the mechanisms of claim 1 (see rejection of claim 1 over Takagi in view of Tsutsui above). The claimed "computer readable medium" is inherent to the CPU of Takagi (Fig. 6, element 612), which carries out the computer program instructions of Figs. 7 and 8 (Col. 17, lines 9-12).

In regard to claim 8, Takagi discloses that a performance curve includes shapes that vary in dependence on said recording medium (note that the "moat [sic] suitable state" of Col. 11, line 29 inherently depends on said recording medium).

In regard to claim 9, Takagi discloses that a performance curve includes shapes that vary in dependence on temperature of said recording medium (Col. 1, line 48-Col. 2, line 4 and note that the "moat [sic] suitable state" of Col. 11, line 29 inherently depends on the temperature of said recording medium).

7. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi in view of Tsutsui as applied to claims 1 and 6 above and further in view of Okada.

Takagi in view of Tsutsui discloses the apparatus and method of claims 1 and 6 respectively including said performance function value. However, Takagi in view of Tsutsui does not disclose that said performance value function is adapted to a function curve that provides more abrupt slope at the peak of the curve.

Okada discloses a function curve (Fig. 16A) that provides a more abrupt slope at the peak of the curve than another function curve (Fig. 16B). Okada further discloses correcting focus precision using a performance value ("maximum point" of Fig. 15, step S1504) adapted to the function curve (Fig. 16A) that provides a more abrupt slope at the peak of the curve without the

steps of measuring reproduction signal amplitude after changing the target position at different steps (Fig. 15, step S1506) and obtaining the center point of a flat range obtained (Fig. 15, step S1508).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for said performance function value of Takagi in view of Tsutsui to be adapted to a function curve that provides more abrupt slope at the peak of the curve as suggested by Okada, the motivation being to for the performance function value of Takagi in view of Tsutsui to be determined without the time-consuming additional measurement steps.

8. Claims 1, 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Nakagawa et al (hereafter Nakagawa) (US 5,986,592).

In regard to claim 1, Verboom discloses a recording and playback apparatus (Fig. 4) for recording data onto a predetermined recording medium (Fig. 4, element 2) and playing back said data from said recording medium (Col. 1, lines 10-20), said recording and playback apparatus comprising: a judgment mechanism (inherent mechanism to determine which FSP track is nearest the track to be read "[d]uring data readout" (Col. 3, lines 49-59)) to determine whether or not to correct focus precision when recording data onto an Nth track ("track to be read" of Col. 3, lines 58-59) of said recording medium or playing back data from said Nth track (note that focus precision is corrected when the FSP track nearest the track to be read changes and the stored focus-offset value for the new nearest FSP track is selected (see Col. 3, lines 49-59)); a computing mechanism (Fig. 4, elements 104 and 162) to compute a performance function value ("highest value for (A1+A2)-(B1+B2)" of Col. 5, lines 43-47) based on a jitter value **or amplitude** of a signal obtained from an already recorded track ("FSP track nearest the track to be

read" of Col. 3, lines 58-59) in the neighborhood of said Nth track (Col. 3, lines 49-59), and a correction mechanism (inherent mechanism that selects the stored "focus-offset value for the FSP track nearest the track to be read" (Col. 3, lines 57-59)) to correct said focus precision if said judgment mechanism determines to correct said focus precision in said recording data onto said Nth track of said recording medium or playing back data from said Nth track, said correction mechanism operating to correct said focus precision by using said performance function value (Col. 3, lines 39-59 and Col. 5, lines 43-47 and note that focus precision is corrected if the "FSP track nearest the track to be read" changes by selecting the stored focus-offset value, which "provides the highest value for (A1+A2)-(B1+B2)," for the new nearest FSP track). Verboom does not disclose that the signal is an RF signal. However, Verboom discloses that data are recorded in a run-length-limited (RLL) code (Col. 4, lines 55-57).

Nakagawa discloses obtaining an RF signal to reproduce data recorded on a recording medium in a RLL code (Col. 1, lines 6-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the obtained signal of Verboom to be an RF signal as suggested by Nakagawa, the motivation being to reproduce the RLL coded data of Verboom.

In regard to claim 4, Verboom discloses that said correction means is capable of correcting said focus precision by using a signal played back from an (N - 1)th track immediately preceding said Nth track (Col. 3, lines 49-59). It is noted that when the Nth track is the track immediately following a one of the three Standard Format Part (SFP) tracks, the nearest SFP that is used to correct focus precision will be the (N-1)th track immediately preceding said Nth track.

In regard to claim 6, Verboom in view of Nakagawa discloses a recording and playback method having method steps corresponding to the mechanisms of claim 1 (see rejection of claim 1 over Verboom in view of Nakagawa above).

In regard to claim 7, Verboom in view of Nakagawa discloses a computer performing the method steps corresponding to the mechanisms of claim 1 (see rejection of claim 1 over Verboom in view of Nakagawa above). The claimed "computer readable medium" is inherent to the control unit of Takagi (Fig. 4, element 106), which carries out the computer program instructions described in Col. 3, lines 49-59 (Col. 5, line 1-Col. 6, line 4).

In regard to claims 8 and 9, Verboom discloses a function curve ("(A1+A2)-(B1+B2)" on Col. 5, line 47). It is noted that the shape of the function curve of Verboom will inherently vary in dependence on said recording medium and on the temperature of said recording medium.

Response to Arguments

9. Applicant's arguments filed April 20, 2006 have been fully considered but they are not persuasive. Applicant argues that once recording or playback has started, no judgment to determine whether or not to correct focus precision is made. However, during the data read out of Verboom, the "track to read" of Col. 3, lines 58-59 changes as data from the tracks is progressively read. As the "track to be read" of Col. 3, lines 58-59 changes, the "FSP track nearest the track to be read" (Col. 3, lines 58-59) also changes. The focus precision correction of Verboom corrects focus precision by changing the selected stored focus-offset value from the stored focus-offset value for the old FSP track nearest the track to be read to the stored focus-offset value for the new FSP track nearest the track to be read when the FSP track nearest the track to be read changes (see Col. 3, lines 49-59). Accordingly, a judgment to determine that the

FSP track nearest the track to be read has or has not changed and, as a result, to correct or not to correct focus precision after playback has started is inherent for correction of the focus precision of Verboom.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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